

REMARKSAmendments

In accordance with the Examiner's Amendment accompanying the Notice of Allowability, claims 2-6, 8-10, 12-23 and 27 have been amended to replace "A" by --The--.

Disclosure Under 37 CFR § 1.56

In fulfilling the duty of candor and good faith, the following documents are hereby disclosed to the Patent Office in accordance with 37 CFR § 1.56. It is not admitted that the information in the listed documents is material to patentability as defined in 37 CFR § 1.56(b). The Examiner is requested to consider the documents in the examination of this application.

Accompanying this statement are Forms PTO/SB/08A and PTO/SB/08B in duplicate on which the documents are listed. The Examiner is requested to return an initialed and signed copy of the forms once the documents have been considered.

The following documents were cited during the prosecution of U.S. Application No. 09-395,869 (attorney docket number MP1705-US1), now U.S. Patent No. 6,640,420, which is the parent of the present application. This application is also related to U.S. Patent No. 6,854,176 (Application No. 10/017,670, which was a continuation in part of the '420 application; MP1705-US2), Application No. 10/088,253 (now abandoned, which is the national stage of a counterpart of the '420 application and is a continuation-in-part of the '420 application; MP1705-US3), and Application No. 11/022,352 (a continuation of the '253 application and currently pending with Examiner Joselito Sasia Baisa in art unit 2832; MP1705-US5).

U.S. PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant
US-2,482,316	09-20-1949	Bocking
US-3,221,145	11-30-1965	Hager, Jr.
US-3,351,882	11-07-1967	Kohler et al.
US-3,435,399	03-25-1969	Gielisse et al.
US-3,497,859	02-24-1970	Bang
US-3,648,364	03-14-1972	Endo
US-3,775,725	11-27-1973	Endo
US-3,835,434	09-10-1974	Kahn

US-4,088,828	05-09-1978	Yamamoto et al.
US-4,200,970	05-06-1980	Schonberger
US-4,237,441	12-02-1980	van Konynenburg et al.
US-4,238,812	12-09-1980	Middleman et al.
US-4,255,698	03-10-1981	Simon
US-4,272,471	06-09-1981	Walker
US-4,304,987	12-08-1981	van Konynenburg
US-4,315,237	02-09-1982	Middleman et al.
US-4,317,027	02-23-1982	Middleman et al.
US-4,327,351	04-27-1982	Walker
US-4,330,703	05-18-1982	Horsma et al.
US-4,352,083	09-28-1982	Middleman et al.
US-4,371,860	02-01-1983	May et al.
US-4,388,607	06-14-1983	Toy et al.
US-4,426,633	01-17-1984	Taylor
US-4,434,416	02-28-1984	Schonberger
US-4,445,026	04-24-1984	Walker
US-4,463,407	07-31-1984	Berger et al.
US-4,475,138	10-02-1984	Middleman et al.
US-4,486,737	12-04-1984	Ott
US-4,486,738	12-04-1984	Sadlo et al.
US-4,514,620	04-30-1985	Cheng et al.
US-4,529,960	07-16-1985	Uchida et al.
US-4,534,889	08-13-1985	van Konynenburg et al.
US-4,545,926	10-08-1985	Fouts et al.
US-4,560,498	12-24-1985	Horsma et al.
US-4,591,700	05-27-1986	Sopory
US-4,593,181	06-03-1986	Jensen et al.
US-4,605,471	08-12-1986	Mitchell
US-4,660,017	04-21-1987	Momoki et al.
US-4,689,475	08-25-1987	Matthiesen
US-4,706,060	11-10-1987	May
US-4,714,910	12-22-1987	Schwingenschuh et al.
US-4,724,417	02-09-1988	Au et al
US-4,757,298	07-12-1988	Nishikawa et al.
US-4,757,581	07-19-1988	Yamada et al.
US-4,774,024	09-27-1988	Deep et al.
US-4,777,718	10-18-1988	Henderson et al.
US-4,780,598	10-25-1988	Fahey et al.
US-4,786,888	11-22-1988	Yoneda et al.
US-4,788,523	11-29-1988	Robbins
US-4,800,253	01-24-1989	Kleiner et al.
US-4,801,784	01-31-1989	Jensen et al.

US-4,811,164	03-07-1989	Ling et al.
US-4,845,838	07-11-1989	Jacobs et al.
US-4,861,966	08-29-1989	Matthiesen et al.
US-4,873,508	10-10-1989	Ankenman et al.
US-4,876,439	10-24-1989	Nagahori
US-4,882,466	11-21-1989	Friel
US-4,904,850	02-27-1990	Claypool et al.
US-4,907,340	03-13-1990	Fang et al.
US-4,924,074	05-08-1990	Fang et al.
US-4,924,204	05-08-1990	Uchida
US-4,924,205	05-08-1990	Caporali et al.
US-4,935,156	06-19-1990	van Konynenburg et al.
US-4,937,551	06-26-1990	Plasko
US-4,959,505	09-25-1990	Ott
US-4,977,309	12-11-1990	Uchida
US-4,992,771	02-12-1991	Caporali et al.
US-4,993,142	02-19-1991	Burke et al.
US-5,015,824	05-14-1991	Monter et al.
US-5,017,243	05-21-1991	Otsubo
US-5,049,850	09-17-1991	Evans et al.
US-5,057,811	10-15-1991	Strott et al.
US-5,085,364	02-04-1992	Ishikawa et al.
US-5,089,801	02-18-1992	Chan et al.
US-5,142,263	08-25-1992	Childers et al.
US-5,166,658	11-24-1992	Fang et al.
US-5,194,316	03-16-1993	Horner et al.
US-5,196,136	03-23-1993	Dishart et al.
US-5,210,516	05-11-1993	Shikama et al.
US-5,212,466	05-18-1993	Yamada et al.
US-5,216,404	06-01-1993	Nagai et al.
US-5,228,188	07-20-1993	Badihi et al.
US-5,241,741	09-07-1993	Sugaya
US-5,247,277	09-21-1993	Fang et al.
US-5,258,738	11-02-1993	Schat
US-5,271,548	12-21-1993	Maiwald
US-5,280,263	01-18-1994	Sugaya
US-5,291,535	03-01-1994	Baker et al.
US-5,303,115	04-12-1994	Nayar et al.
US-5,347,258	09-13-1994	Howard et al.
US-5,351,390	10-04-1994	Yamada et al.
US-5,378,407	01-03-1995	Chandler et al.
US-5,382,938	01-17-1995	Hansson et al.
US-5,451,919	09-19-1995	Chu et al.

US-5,451,921	09-19-1995	Crawford et al.
US-5,488,348	01-30-1996	Asida et al.
US-5,582,770	12-10-1996	Chu et al.
US-5,747,147	05-05-1998	Wartenberg et al.
US-5,777,541	07-07-1998	Vekeman
US-5,801,612	09-01-1998	Chandler et al.
US-5,818,676	10-06-1998	Gronowicz, Jr.
US-5,831,510	11-03-1998	Zhang et al.
US-5,852,397	12-22-1998	Chan et al.
US-5,864,281	01-26-1999	Zhang et al.
US-5,907,271	05-25-1999	Hirano
US-5,907,272	05-25-1999	Mcguire
US-5,907,273	05-25-1999	Ross, Jr. et al.
US-6,020,808	02-01-2000	Hogge
US-6,104,587	08-15-2000	Banich et al.
US-6,130,597	10-10-2000	Toth et al.
US-6,172,591-B1	01-09-2001	Barrett

FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant	Translation
EP-0223404-A1	05-27-1987	Raychem Corporation (Kleiner et al.)	N/A
EP-0308306-A1	03-22-1989	Compagnie Europeenne de Composants Electroniques LCC (Mallez et al.)	Abstract
EP-0398811-A2	11-22-1990	Fujikura Ltd. (Yamada et al.)	N/A
EP- 0509582-A2	10-21-1992	N.V. Philips Gloeilampenfabrieken (Schat)	N/A
EP-0790625-A2	08-20-1997	Daito Communication Apparatus Co. Ltd. (Sugaya)	N/A
EP-0649562-B1	03-04-1998	Raychem Corporation (Graves et al.)	N/A
EP-0955643-A1*	11-10-1999	Matsushita Electric Industries Co. Ltd.	N/A
DE-2816593-A1	10-18-1979	Siemens AG (Grube et al.)	Abstract
DE-3122612-A1	12-23-1982	Draloric Electronic GmbH (Schurmann)	Abstract
DE-3839868-A1	06-08-1989	Murata Mfg. Co., Ltd. (Uchida; US 4,924,204)	counterpart
DE-3910861-A1	11-02-1989	Murata Mfg. Co., Ltd. (Uchida; US 4,997,309)	counterpart

DE-4000089-A1	07-12-1990	Mitsubishi Denki KK (Otsubo; US 5,017,243)	counterpart
DE-8716103-U1	03-03-1988	Degussa AG	Partial translation
GB-1415454-A	11-26-1975	Welwyn Electric Ltd.	N/A
JP-49-28594-A	08-03-1974	Matsushita Electric Industries Co. Ltd. (Ishiyama et al.)	Translation
JP-54-73260-A	06-12-1979	Tokyo Denki Kagaku Kogyo KK (Towatari et al.)	Translation
JP-56-150802-A	11-21-1981	TDK (Mano et al.)	Translation
JP-61-124104-A	06-11-1986	Matsushita Electric Industries Co. Ltd (Aikawa)	Translation
JP-63-216301-A	09-08-1988	Nippon Mektron (Akatsuka et al.)	Translation
JP-63-244702-A	10-12-1988	Nippon Mektron (Tanaka)	Translation
JP-5-29111-A	02-05-1993	Matsushita Electric Ind. Co. Ltd. (Ebina)	Abstract
JP-6-283301-A	10-07-1994	Mitsubishi Materials Corp. (Yoshinori)	Abstract
WO84/01259	03-29-1984	Ericsson (Olofsson et al.)	N/A
WO 94/01876	01-20-1994	Raychem Corporation (Graves et al.)	N/A
WO 95/08176	03-23-1995	Raychem Corporation (Fang et al.)	N/A
WO95/31816	11-23-1995	Raychem Corporation (Zhang et al.)	N/A
WO95/34084	12-14-1995	Raychem Corporation (Zhang et al.)	N/A
WO98/12715	03-26-1998	Matsushita Electric Industries Co. Ltd. (Kojima et al.)	N/A
WO98/29879*	07-09-1998	Matsushita Electric Industries Co. Ltd.	N/A
WO 99/45551 **	09-10-1999	Bourns Multifuse Hong Kong Ltd. (Barrett)	N/A

* counterpart of U.S. 6,188,308

** counterpart of U.S. 6,172,591 B1

NON-PATENT LITERATURE DOCUMENTS

Coombs, <u>Printed Circuit Handbook</u> , 1996, p. 24.1 - 24.17, 40.1 - 40.4
Harper, <u>Electronic Packaging and Interconnection Handbook</u> (1991), p. 1.37 - 1.43, 8.3 - 8.5, 8.53 - 8.56, 9.1 - 9.16, 9.41 - 9.49.

Patent Abstracts of Japan, vol. 013, no. 198 (E-756), 11 May 1989 & JP 01-020601A (JCG Corp.), 24 January 1989, abstract.
"PolySwitch PTC Devices", Standard Product List, Raychem Corporation, May 1992.
"PolySwitch SMD Installation Guidelines" trade brochure, Raychem Corporation, Nov. 1992.
"PolySwitch SMD Surface Mount Devices PTC Overcurrent Protection" trade brochure, Raychem Corporation, Nov. 1992.
"Protection of Batteries with PolySwitch Devices", Raychem Corporation, Jan. 1987.
Search Report for International Application No. PCT-US93-06480, October 7, 1993.
Search Report for International Application No. PCT-US94-10137, November 23, 1994.
Search Report for International Application No. PCT-US95-05567, June 26, 1995.
Search Report for International Application No. PCT-US95-07420, September 4, 1995.
Search Report for International Application No. PCT-US00-25118, June 13, 2001.
Standler, <u>Protection of Electronic Circuits from Overvoltages</u> , 1989, p. 133
Sunahara, JP 40415001A (5-1992), abstract.
U.S. Patent Application No. 07-893626 (Chandler et al.), filed June 5, 1992.
U.S. Patent Application No. 09-181,028 (Graves et al, filed October 27, 1998), now U.S. Patent No. 6,651,315.
U.S. Patent Application No. 09-364,504 (Isozaki et al., filed July 30, 1999), now U.S. Patent No. 6,358,438.
U.S. Patent Application No. 08-816,471 (Chandler et al., filed March 13, 1997), now U.S. Patent No. 6,570,483.
U.S. Patent Application No. 09-060,278 (Chiang et al., filed April 14, 1998), now U.S. Patent No. 6,606,023.

The following additional documents, not listed above, were cited during the prosecution of Application No. 10-017,670, now U.S. Patent No. 6,854,176.

U.S. PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant
US-5,763,929	06-09-1998	Iwata
US-6,188,308	02-13-2001	Kojima et al.
US-6,297,722-B1	10-02-2001	Yeh
US-6,331,763-B1	12-18-2001	Thomas et al.
US-6,429,533-B1	08-06-2002	Li et al.
US-6,570,483-B1	05-27-2003	Chandler et al.
US-2001-0000658-A1*	05-03-2001	Barrett et al.
US-2002-0050914-A1	05-02-2002	Chiang et al.
US-2002-0130757-A1	09-19-2002	Huang et al.
US-2002-0140540-A1	10-03-2002	Chen et al.

*Incorrectly listed on U.S. 6,854,176 as 2001-0000685 due to error on 1449 submitted by Applicants.

FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant	Translation
JP-4-15001-A	05-22-1992	Murata Mfg. Co. Ltd. (Sunahara)	Abstract

NON-PATENT LITERATURE DOCUMENTS

AUTHOR, Title of Article, Title of Item, Date, Pages, Volume-Issue No., Publisher, City, Country	Translation
Search Report for International Application No. PCT-US02-39392, May 13, 2003.	N/A

The following additional documents, not listed above, have been cited during the prosecution of Application No. 11-022,352.

U.S. PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant
US-6,606,023*	08-12-2003	Chiang et al.
US-6,640,420**	11-04-2003	Hetherton et al.
US-6,854,176***	02-15-2005	Hetherton et al.

* Issued patent of Application No. 09-060,278 and Publication No. 2002-0050914, referred to above.

** Parent of the present application; not listed on the attached Form PTO/SB/08A.

*** CIP of the parent of the present application; filed after priority date of the present application and not listed on the attached Form PTO/SB/08A.

The following document, not listed above, was cited by the European Patent Office in the prosecution of European Application No. 00961888.5, which is a counterpart for the present application.

U.S. PATENT DOCUMENTS

Document Number	Publication Date	Name of Patentee or Applicant
US-5,493,266	02-20-1996	Sasaki et al.

Copies of Documents

In accordance with 37 CFR §1.98(d), copies of the documents submitted by Applicants during the prosecution of the parent application are not being submitted. In accordance with 37 CFR §1.98(a)(2), copies of each U.S. patent and each U.S. patent application publication cited by the Examiner during the prosecution of the parent application are not being sent.

In accordance with 37 CFR §1.98(a)(2), copies of the U.S. patents and patent publications listed above (which were not cited during the prosecution of the parent case) are not being submitted, although copies will be sent on request.

Copies of non-U.S. patents and publications are enclosed. Except as indicated above, all of the documents listed above are listed on the accompanying Forms PTO/SB/08A and PTO/SB/08B, and Applicants will readily supply copies if needed.

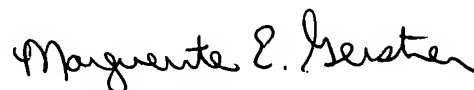
Fee

Applicant believes that because this Disclosure Statement is being submitted with this RCE, no fee is due. If this is incorrect, please charge any necessary fee to Deposit Account No. 18-0560.

Conclusion

It is believed that this application is now in condition for allowance and such action at an early date is earnestly requested. If, however, there are any outstanding issues which can be usefully discussed by telephone, the Examiner is asked to call the undersigned.

Respectfully submitted,



Marguerite E. Gerstner
Registration No. 32,695
Telephone (650) 361-2483 .